

Circular No. 59

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Cherry Leaf Spot or Shot Hole Fungus

The two names given for this disease arise from the two different effects produced on the foliage. When infection takes place early while the foliage is growing vigorously the fungus kills small round areas, and the dead tissue falls out leaving the well known "shot hole" effect. Infection starting after the leaves have become mature and no more growth is possible results in the leaf spot type of disease, characterized by small discolored or dead spots usually bearing pustules of the fungus.

The shot hole fungus (*Coccomyces hiemalis*) has a pronounced effect on cherry leaves compared with most other leaf spot diseases; a very few small spots on growing leaves seem to affect sour cherry leaves so profoundly that they turn yellow and are rapidly cast. In the sweet cherry the yellow discoloration is not so apparent but early defoliation follows the development of even mild attacks of leaf spot. This defoliation is the most outstanding effect of the leaf spot disease. Because it comes after the fruit season in most cases some people are inclined to think it is of small consequence, but it should be understood that the leaves are the food organs of a tree and that upon their activities depend the formation of buds for next year's crop and a store of food to start the next season's growth. In short, leaf spot directly affects the next year's cherry crop.

The leaf spot fungus is a hot weather parasite; in this respect it differs from apple scab. Both fungi live over winter on the fallen leaves and from these a new crop of spores is produced next season to infect the new foliage. But while apple scab produces spores in the cool, moist weather of early spring, the leaf spot fungus does not begin to shed its spores from the old cherry leaves till warm weather arrives.

Control Measures

For this reason spraying for leaf spot is most effective after the blooming period. Three applications are advised (1) just after the petals fall, (2) about two weeks later, (3) just after the fruit is picked. One may use commercial lime sulfur 1-40, or 90-10 sulfur dust. The addition of iron sulfate to the lime sulfur solution at the rate of $2\frac{1}{2}$ pounds per 100 gallons increases the adhesive qualities of this spray and helps to prevent burning. Bordeaux mixture 3-3-50 is also effective but this material has shown a tendency to cause leaf fall in some cases.

In addition to spray applications a great deal can be done to keep down cherry leaf spot by getting the fallen leaves out of the way. In home gardens these can be raked up and burned, and in orchards they can be plowed under in which case they become harmless. The covering should be done before the blossoms open to give the best results.

Leaf spot is often severe in nursery stock, young trees with fast growing foliage being especially subject to attack. It is advisable to spray or dust such stock 4-7 times during the season if leaf spot is to be well controlled.